

REMARKS/ARGUMENTS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1-5, 9-10, 15, 75 and 79-90 are presently active, Claims 6-8, 11-14, 16-74 and 76-78 are canceled without prejudice, Claims 1, 3, 4, 9, 15 and 75 are amended to clarify the claimed subject matter, and Claims 81-90 are added by the present amendment. No new matter has been added.

In the outstanding Office Action, Claim 1-5, 9-10, 75 and 79-80 were rejected under 35 U.S.C. § 103(a) as unpatentable over Sunahara (U.S. Pat. No. 6,153,290) in view of Ehman et al. (U.S. Pat. No. 6,021,050), and further in view of Lauffer et al. (U.S. Pat. No. 5,029,253). Claim 15 was rejected under 35 U.S.C. § 103(a) as unpatentable over Sunahara in view of Ehman et al., and further in view of Gorczyca et al. (U.S. Pat. No. 5,161,093).

Regarding the rejection of Claims 1-5, 9-10, 75 and 79-80, Applicants respectfully submit that the rejection has been overcome because, in Applicants' view, amended independent Claims 1 and 75 patentably distinguish over the applied references as discussed below.

Claim 1 recites, *inter alia*, "a first via hole formed in the first resin substrate, the first via hole directly connected to the first conductive pad and one of the conductive circuits on the core substrate" and "a second via hole formed in the first resin substrate, the second via hole directly connected to the second conductive pad and one of the conductive circuits on the core substrate."

Instead, Sunahara describes that the through hole 15 is directly connected to the conductive circuit (the wiring conductor 16, the resistor 12) and one electrode of the capacitor 10. However, the through hole 13 in Sunahara is not directly connected to the

conductive pad 19a and the other electrode of the capacitor 10. Thus, Sunahara fails to teach or suggest “a first via hole formed in the first resin substrate, the first via hole directly connected to the first conductive pad and one of the conductive circuits on the core substrate” and “a second via hole formed in the first resin substrate, the second via hole directly connected to the second conductive pad and one of the conductive circuits on the core substrate,” as recited in Claim 1.

Claim 75 recites, *inter alia*, “a capacitor formed in the opening of the second resin substrate and located immediately below the bump area” and “wherein at least one of the bumps is electrically connected to an electrode of the capacitor through a via hole formed in the core substrate, the via hole formed immediately below the bump area.”

Instead, Sunahara and Ehman et al. fail to disclose a capacitor located immediately below a bump area. Sunahara and Ehman et al. further fail to disclose a via hole formed immediately below the bump area and electrically connecting an electrode of the capacitor with at least one of the bumps. On the other hand, Lauffer et al. describes that one chip 235 is connected to a capacitor 141 through a via hole 221. However, the via hole 221 in Lauffer et al. is not formed immediately below a bump area. Thus, Lauffer et al. fails to teach or suggest “wherein at least one of the bumps is electrically connected to an electrode of the capacitor through a via hole formed in the core substrate, the via hole formed immediately below the bump area,” as recited in Claim 75.

Accordingly, independent Claims 1 and 75 patentably distinguish over Sunahara, Ehman et al., and Lauffer et al. Therefore, independent Claims 1 and 75 and the pending Claims 2-5, 9-10 and 79-84 dependent directly or indirectly from Claims 1 and 75 are believed to be allowable.

Regarding the rejection of Claim 15, Applicant respectfully submits that the rejection has been overcome because, in Applicants' view, amended Claim 15 patentably distinguishes over the applied references as discussed below.

Claim 15 recites, *inter alia*, "said first resin substrate and said ceramic capacitor are coupled to each other by an insulating bonding agent and a coefficient of thermal expansion of the insulating bonding agent is lower than that of said first resin substrate." Therefore, the coefficient of thermal expansion of the bonding agent is set to close to that of the ceramic capacitor. Thus, even if an internal stress occurs due to the difference in the coefficient of thermal expansion among the core substrate, the bonding agent and the ceramic capacitor, cracks and separations less occur to the core substrate, making it possible to attain high reliability and prevent the occurrence of migration.

Instead, Sunahara, Ehman et al., and Gorczyca et al. fail to teach or suggest that a coefficient of thermal expansion of the insulating bonding agent is lower than that of said first resin substrate.

Accordingly, Claim 15 patentably distinguishes over Sunahara, Ehman et al., and Gorczyca et al. Therefore, Claim 15 is believed to be allowable.

Regarding newly added independent Claim 86, Applicants note that Claim 86 patentably distinguishes over Sunahara, Ehman et al., Lauffer et al. and Gorczyca et al. as discussed below.

Claim 86 recites, *inter alia*, "wherein each of said first, second and third resin substrates has a core made of glass cloth and impregnated with a resin." By using a core made of glass cloth and impregnated with a resin for the resin substrates, the coefficient of thermal expansion of the core substrate is set to close to that of the ceramic capacitor. Thus, even if an internal stress occurs by the difference in the coefficient of thermal expansion

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between the core substrate and the ceramic capacitor, cracks and separations less occur to the core substrate, making it possible to attain high reliability and prevent the occurrence of migration.

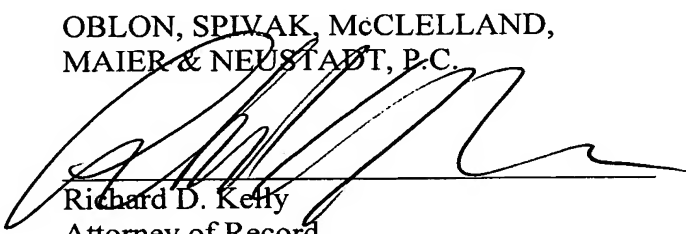
Instead, Sunahara, Ehman et al., Lauffer et al. and Gorczyca et al. fail to teach or suggest that each of said first, second and third resin substrates has a core impregnated with a resin.

Accordingly, Claim 86 patentably distinguishes over Sunahara, Ehman et al., Lauffer et al. and Gorczyca et al. Therefore, independent Claim 86 and the pending Claims 87-90 dependent from Claim 86 are believed to be allowable.

Consequently, in view of the present amendment and in light of the above discussions, it is believed that the outstanding rejection has been overcome, and the application as amended herewith is believed to be in condition for formal allowance. An early and favorable action to that effect is respectfully requested.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.



Richard D. Kelly
Attorney of Record
Registration No. 27,757

Customer Number
22850

Tel: (703) 413-3000
Fax: (703) 413 -2220
(OSMMN 06/04)

Akihiro Yamazaki
Registration No. 46,155

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